



March 26, 2008

Mr. Stephen J. Rourke  
Vice President, System Planning  
Independent System Operator – New England  
Holyoke, Mass.

**Re: TCA Application BHE-07-TCA-01 Dated December 20, 2007**

Dear Mr. Rourke:

BHE provides the following responses to your questions concerning the Downeast Reliability Project TCA application:

**Question 1.**

**With regard to Alternatives 1 and 3, describe the potential difficulties BHE may encounter in obtaining new ROW corridors, specifically cite any environmental issues. Also, does BHE have rights to or own any of the land associated with these ROW corridors?**

Alternative 1 ROW Corridor – Right-of-Way acquisition will be moderately challenging for this alternative. BHE is planning to co-locate a portion of the new line with an existing 34.5kV line. The length of this co-location will be approximately 14 miles, and the existing easement rights are 53 feet in width. The existing rights will be utilized and widened to approximately 130 feet. A rebuild of the existing line (by way of under-build) is anticipated as a separate local project, and will allow the most efficient use of the corridor. BHE also owns fee land at a potential tap point in Ellsworth. It is also anticipated that most of the line will be co-located with a discontinued railroad bed which is in the process of being converted to a multi-use trail system. We have been in contact with the trail committee and thus far have had a positive reception. The biggest ROW challenges will be:

- crossing some extensive wetland areas
- access
- crossing the Narraguagus River
- minimizing impacts on any significant vernal pools that may exist

### Question 1 (continued)

The Maine Department of Environmental Protection strongly encourages co-location of new linear projects with existing corridors. Co-locating minimizes overall impacts and reduces costs of rights-of-way. The heavily co-located nature of the route will make this alternative very achievable. Specific environmental resources encountered will be typical for this area of Maine. We do not anticipate any unusual design requirements due to environmental, regulatory, or landowner considerations.

Alternative 3 ROW Corridor – BHE owns no existing rights for this potential corridor, nor are there any existing utility corridors. There would be two primary environmental challenges: large wetland complexes to avoid, and a crossing of the Machias River would be required. The Machias is a scenic salmon habitat river and the corridor is primarily owned and protected by the State of Maine. One advantage of this route is that fewer landowners would be crossed.

### Question 2.

**Further explain the corridor consolidation as described in alternative 2.**

#### Corridor Consolidation of Alternative 2

This alternative would involve connecting at the Boggy Brook Sub-station, and then co-location with the existing Line 67 northerly to Rebel Hill sub-station, then easterly with Line 66 to Epping. This route alternative is ten miles longer than Alternative 1. Residential development along Line 67 would create some bottlenecks. Environmental constraints are typical of the area and similar to Alternative 1. For Line 67, existing rights could be utilized for approximately two thirds of the length (50-100 feet of new ROW to be purchased); full rights would have to be purchased for one third. For Line 66, no additional rights would need to be acquired for 15% of the route, and 50 feet would have to be acquired for 85% of the route.

### Question 3.

**Where possible, provide a more detailed breakdown, in spreadsheet or table format, of cost estimates for construction labor, materials, engineering and permitting for the proposed project and its alternatives described in Section 3 of the subject TCA. For example, with regard to materials, separate substation facilities versus line equipment, highlighting major components (i.e. transformers, breakers, etc...) Also, confirm if these estimates are study grade ( $\pm 25\%$ ) or are they construction grade ( $\pm 10\%$ ).**

*Due to the sensitive nature of this market cost information, the data is being withheld from public release.*

\* Note:

New Tunk Sub-station will utilize a used 115/34.5 transformer from the BHE system which will be relocated and set up at a cost of approximately \$100,000. 115 and 34.5 breakers are estimated to cost \$1.2 million.

These estimates are at the construction grade level (+/- 10%), assuming a normal escalation of labor and material costs.

These economics are market sensitive and should be kept confidential.

Please contact me if you have any further questions.

Sincerely,

Gerry Chasse  
Manager, Transmission Development  
Bangor Hydro-Electric Company